

USSR

UDC: 621.317.78

CHERNIKOV, V. Z., OZNOBISHIN, V. V.

"Investigation of the Transmission Ratio of a Bolometer in the Hot-Wire Mixer Mode"

Tr. VNII fiz.-tekhn. i radiotekhn. izmereniy (Works of the All-Union Scientific Research Institute of Physicotechnical and Radio Engineering Measurements), 1970, vyp. 2(32), pp 146-154 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A213)

Translation: The article discusses the quantity which characterizes signal conversion in a hot-wire mixer on a bolometer. An expression is derived for the "transmission ratio" of the mixer on the bolometer. Experimental data are given from an investigation of the "transmission ratio" of a mixer on a platinum bolometer in liquid nitrogen. Three illustrations, bibliography of one title. Resumé.

1/1

USSR

UDC 531.383

OZNOBKIN, O. D., ROZHKOVSKIY, V. D., Tula Polytechnical Institute

"Determination of the Maximum Deviations of a Gyrostabilizer Due to the Action of Perturbations Limited Modulo"

Leningrad, IVUZ, Priborostroyeniye, No 11, 1970, pp 82-85

Abstract: The method of B. V. Bulgakov is used to determine the maximum deviations of a uniaxial correctible gyrostabilizer due to the biaxial action of perturbations that are restricted exclusively modulo. Calculation relationships for determination of the maximum deviation of the gyrostabilizer are obtained.
3 bibliographic entries.

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USSR

UDC 543.80:543.253

VEGNERE, V. YA., STRADYN', YA. F., GZOL, YA. YA., and ARBN, A. K.,
Riga Polytechnical Institute, Riga, Latvian Sovnarkhoz

"Characteristic Qualities of the Wave of Electrochemical Splitting of
the C-N Bond in 2-Alkylamino-2-alkylindandiones-1,3"

Riga, Izvestiya Akademii Nauk Latviyskoy SSR, Seriya Khimicheskaya,
No 2, 1970, pp 164-169

Abstract: The goal of this study was the refinement of the polarographic reduction of 2-aminoindandiones-1,3 (I), and attention was directed particularly to the characterization of the wave obtained on electrochemical splitting of the C-N bond. The properties of the first wave of polarographic reduction were studied. It was determined that (I) type of compounds give a two electron polarographic wave of the C-N⁺ bond splitting in aqueous alcohol solutions at pH range 2-12; the height of this wave was limited by the rate of diffusion of depolarizer molecules in the entire pH range studied. In strongly alkaline medium the wave of the C-N⁺ bond splitting disappears because of the

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VEGNERE, V. YA, et al, Izvestiya Akademii Nauk Latvyskoy SSR, Seriya Khimicheskaya, No 2, 1970, pp 164-169

chemical decomposition of the molecules of aminoindandiones in solution. The C-N⁺ bond splitting wave is generated by salts as well as by free bases. When bases enter into the electrode reactions their molecules are first protonated on the electrode surface and the corresponding waves are of quasicapacitive character.

UDC 547.665

USSR

OZOLA, E. Ya., and AREN, A. K., "Order of the Red Banner of Labor" Institute of Organic Synthesis, Latvian SSR Academy of Sciences

"Structure of 2-Acetyl and 2-Phenacyl-2-Aryl-1,3-Indandione Monoximes"

Riga, Izvestiya Akademii Nauk Latvinskoi SSR, Seriya Khimicheskaya, No 4, 1970, pp 457-461

Abstract: 2-Acetyl- and 2-phenacyl-2-aryl-1,3-indandiones react with hydroxylamine hydrochloride in absolute ethanol in the presence of pyridine to form the corresponding monoximes of the carbonyl group in the side chain. Similarly, 2-aryl-2-acetyl-1,3-indandiones react with hydroxylamine to form the corresponding monoximes in the form of colorless crystals. The infrared spectra of the oximes contain the vibration of the β -dicarbonyl system in the 1710 and 1740 cm^{-1} region. The valence vibrations of the hydroxyl group in Nujol are shifted toward the long-wavelength side and they are diffuse. This is an indication for the presence of intermolecular hydrogen bonds in the solid state. In dichloroethane solutions, this absorption band is found at 3560 cm^{-1} . The ultraviolet spectra of the oximes are similar to those of the triketones. Both types of spectra were studied in detail for a number of

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USSR

OZOLA, E. Ya., and AREN, A. K., Izvestiya Akademii Nauk Latvinskoi SSR,
Seriya Khimicheskaya, No 4, 1970, pp 457-461

oximes. Evidence was found that the 2-phenacyl-1,3-indandione oximes exist
in a cyclic 6,5(CO)-benzoylene-6-hydroxy-1,3-oxazine form.

2/2

- 33 -

Acc. Nr:

AP0045430

Abstracting Service:

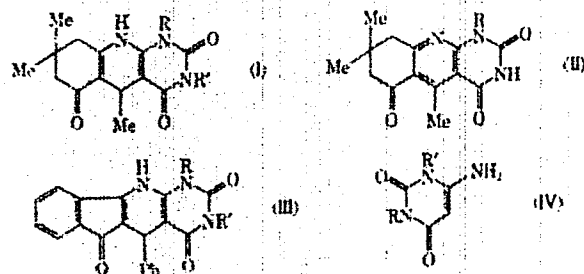
CHEMICAL ABSTRACTS

4/70

Ref. Code:

UR0409

89602e Constants of the acid dissociation of some nitrogen-containing polynuclear systems. Stankevics, E.; Ponglis, I.; Grinsteins, E.; Ozola, A.; Daburs, G. (Inst. Org. Syn., Riga, USSR). *Rhim. Gejertsiki. Soedin.* 1970, (1), 122-4 (Russ). The conventional spectrophotometric method was used to det.



the pK_a's of compds. I-IV (R and R' = H or Me). The results were presented in a table. Michael K. Hrenoff

REEL/FRAHE

19780375

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1/2 025 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--A THERAPEUTICAL PATHOMORPHOSIS OF SCHIZOPHRENIA PROCEEDING WITH
PARANOID DISORDERS -U-
AUTHOR--OZOLA, M.YA
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSKOV, 1970,
VOL 70, NR 4, PP 600-605
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SCHIZOPHRENIA, INSULIN, PSYCHOSIS, HALLUCINATION, NERVOUS
SYSTEM DRUG
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/1660 STEP NO--UR/0246/70/070/004/0600/0605
CIRC ACCESSION NO--AP0106406
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0106406

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR STUDIED 77 PATIENTS IN THE PROCESS OF NEUROLEPTICAL AND INSULIN TREATMENT (34 CASES WITH CONTINUOUS PROGRESSIVE AND 43 WITH SHIFT LIKE FORMS OF THE DISEASE). ON THE BASIS OF SUCH STUDIES A CONCLUSION IS MADE THAT NEUROLEPTICAL TREATMENT DOES NOT INFLUENCE THE MAIN REGULARITIES IN THE COURSE OF THE SCHIZOPHRENIC PROCESS: THE MAIN TYPE OF DEVELOPMENT OF THE DISEASE REMAINS UNCHANGED. IN A CONTINUOUS COURSE THE PREVALENT AND DECISIVE PSYCHOPATHOLOGICAL SYMPTOMATOLOGY (VERBAL HALLUCINOSIS, DELUSIONAL DISORDERS) ARE EXCLUSIVELY REFRACTORY TO THERAPY. IN A SHIFT LIKE COURSE THE NEUROLEPTICS EXERT A MORE EXPRESSED INFLUENCE ON PSYCHOPATHOLOGICAL DISTURBANCES AND THE COURSE OF THE DISEASE. IN SUCH CASES THE TRAITS OF SHIFTS ARE INTERSIFIED. NEUROLEPTICAL DRUGS IN SOME CASES DISPLAY AFFECTIVE DISORDERS IN PATIENTS, WHICH BECOME MORE APPARENT DURING REMISSIONS. A COMPARISON OF INSULIN, SHOCK AND NEUROLEPTICAL TREATMENT IN PARANOID SCHIZOPHRENIA ALLOWS TO MARK A SIGNIFICANT HIGHER EFFECTIVITY OF THE LATTER FORM OF THERAPY.

UNCLASSIFIED

USSR

UDC 632.95

AREN, A. K., FAL'KENSHTEYN, B. Yu., ZELMEN, V. N., YEGOROVA, L. V., OZOLIN',
E. P., POPLAVSKAYA, N. I., and SHOFRO, E. A., Institute of Organic Synthesis,
Academy of Sciences Latvian SSR

"Method of Preparing 2-(α -phenyl- α -p-fluorophenylacetyl)-1,3-indandione"

USSR Authors' Certificate No 263586, filed 14 Nov 67, published 4 Jun 70
(from RZh-Khimiya, No 1, 10 Jan 71, Abstract No 1N531P)

Translation: A mixture of 4.5 g metallic Na is heated at 130-140° in 50 ml anhydrous PhMe, 45 ml anhydrous MeOH is then added dropwise to the mixture. The mass is heated on an oil bath for 1-1.5 hr with intensive stirring, evaporated, and the residue cooled to 80° and treated with 150 ml anhydrous C₆H₆ and 20 g dimethyl phthalate. A mixture of 11.25 g freshly prepared phenyl-fluorophenylacetone in 50 ml anhydrous C₆H₆ is added dropwise over the space of 1 hr to the reaction mass, with a 50 ml mixture of C₆H₆ and MeOH distilled off at the same time. Then once more a mixture of 11.25 g freshly prepared 2-phenyl-2-p-fluorophenylacetone and 4 g anhydrous dimethyl phthalate in 50 ml anhydrous C₆H₆ is added dropwise, with 50 ml of solvents being distilled off. During condensation oil bath temperature is 118-120°. After components are mixed, the mixture is stirred for 10 hr at 118-120°.

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Aren, A. K., et al., USSR Authors' Certificate No 263586, filed 14 Nov 67, published 4 Jun 70 (from RZh-Khimiya, No 1, 10 Jan 71, Abstract No LN531P)

evaporated at 11-15 mm; the oily residue is treated with 800 ml cold water, and heated with stirring. The layer of water is decanted, and the crystalline residue treated analogously three or four times with water until it dissolves completely. Combined water layers are treated with 40 ml dilute HCl (acid, 1:1) until the reaction of the medium is acid, are stirred, kept for ~12 hr, and decanted. The amorphous residue is treated with 80 ml hot iso-PrOH and stirred. A yellow precipitate is filtered off, which is rinsed two or three times with 10 to 15 ml portions of cold iso-PrOH, to yield 15 g (42.5%) 2-(α -phenyl- α -p-fluorophenylacetyl)-1,3-indandione (I), melting point 121-5°. The isopropyl mother liquors are diluted with 100-150 ml water and decanted; the oily residue is treated with 5 ml HCl (acid, 1:1), to yield, as described above, an additional 3 g (8.5%) I. I possesses a broad spectrum of zoocidal action.

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1/2 016 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--2, ALPHA, PHENYL, ALPHA, P, FLUOROPHENYL, ACETYL, 1, 3, INDANDIONE -U-

AUTHOR--(05)-AREN, A.K., ZELMEN, V.N., OZOLIN, R.R., SHAFRO, E.A.,
FALKENSHTYEN, B.YU.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,586
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, AROMATIC KETONE, CHEMICAL PATENT, CHEMICAL
SEPARATION, FLUORINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1587

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0135228

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AA0135228

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE PRODUCT IS SEPD. BY
SUCCESSIVE TREATMENT WITH H SUB2 O, A MINERAL ACID, AND ISOPROPYL ALC.
FACILITY: INSTITUT ORGANICHESKOGO SINTEZA AN LATVIYSKOY SSR.

UNCLASSIFIED

USSR

UDC 615.213:547.754

OZOLIN SH. Ya. V., and GERMANE, S. K., Institute of Organic Synthesis,
Academy of Sciences Latvian SSR

"Study of the Pharmaceutical Properties of Some 2-(δ -aminobutynyl) Indane-
-1,3-diones and 2-(δ -aminobutynyl) Indane-1,3-diols. II. A Study of the
Tranquilizing Properties"

Riga. Izvestiya Akademii Latviyskoy SSR, 1972, No 11(304), pp 97-101

Abstract: Thirty specific indanes were tested for toxicity (LD₅₀ method) and tranquilizing properties in white mice. The substitutions occurred on the 2-carbon of the indane ring and on the terminal nitrogen. A study of the drugs' influence of muscle tone and coordination was also performed. All compounds tested indicated some tranquilizing action. The greatest effect was demonstrated by the phenylindanes, having a phenylpiperazine radical at the terminal nitrogen. The least effect was demonstrated by those compounds having a quaternary nitrogen, i.e., those derived from the iodide salt of the indane-dione. The dione and its corresponding diol did not differ significantly in their tranquilizing effect.

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1/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--RAMAN AND INFRARED ABSORPTION SPECTRA OF SOME BUTOXYASILANES -U-
AUTHOR--DZOLINS, L., KOVALEV, I.F., ARBUZOVA, V.A., SHEVCHENKO, I.V.,
VORONKOV, N.G.
COUNTRY OF INFO--USSR
SOURCE--LATV. PSR ZINAT. AKAD. NESTIS, KIM. SER. 1970, (1), 47-51
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--RAMAN SPECTRUM, IR SPECTRUM, ORGANIC SILANE, ORGANIC OXYGEN
COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/0440 STEP NO--UR/0464/70/000/001/0047/0061
CIRC ACCESSION NO--AP0107046
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107046

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RAMAN AND IR SPECTRA OF ME SUB3 SI(OBU) (I), ME SUB2 SI(OBU) SUB2 (II), MESI(OBU) SUB2 (III), SI(OBU) SUB4 (IV), SI(SEC-BUO) SUB4 (V), AND SI(ISO-BUO) SUB4 (VI) WERE MEASURED. FREQUENCIES, INTEGRAL INTENSITIES, HALF BANDWIDTHS, AND DEGREES OF DEPOLARIZATION OF THE RAMAN LINES ARE TABULATED. THE SCATTERING COEFFS. IN THE SCALES 5B PRIME2 PLUS 7G PRIME2 (S) AND 5B PRIME2 PLUS 13G PRIME2 (R), THE TRACE, AND THE ANISOTROPY OF THE POLARIZABILITY TENSOR WERE CALCD. ESTN. OF FORCE CONSTS. FOR III AND IV WAS MADE. THE DISPERSION OF THE REFRACTION COEFF. WAS STUDIED IN II, V, AND VI AND THE ABS. RAMAN SCATTERING CROSS SECTIONS FOR THE STOKES WAVES NU SUB3 (SI-O) WERE EVALUATED. THE CORRECTED FREQUENCIES, HALF-BANDWIDTHS, AND ABS. INTENSITIES OF SELECTED IR VIBRATIONS WERE OBTAINED BY NUMERICAL BAND SEPN. THE EFFECT OF SUBSTITUENTS ON THE STUDIED PARAMETERS IS DISCUSSED.

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1/2 026

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--ELECTROLYTE FOR DEPOSITION OF INDIUM GALLIUM ALLOY -U-

AUTHOR--(05)-AKMENS, YA.P., MIKHALOVICH, D.L., RIKMAN, S.I., OZOLINSH,
I.M., UDEM, D.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,095

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRATSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--10FEB70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CHEMICAL PATENT, ELECTROLYTE, INDIUM ALLOY, GALLIUM ALLOY,
PHENOL, GLYCINE, INDIUM CHLORIDE, GALLIUM CHLORIDE, METAL DEPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1841

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132106

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AAG132106

ABSTRACT/EXTRACT--(U) GP-O-

ABSTRACT.

AN ELECTROLYTE FOR DEPOSITION OF

IN, GA ALLOY HAS THE FOLLOWING COMPN. IN CHLORIDE 50-150, GA CHLORIDE

2.5-25, GLYCINE 30-60, AND PHENGL 0.3-1 G-L.

UNCLASSIFIED

USSR

UDC: 621.317.761(088.8)

OZOLIS, Ya. Ya., RANKIS, G. Zh., Riga Polytechnical Institute

"A Frequency Meter With Magnetic Tuning"

USSR Author's Certificate No 259270, filed 23 Oct 67, published 24 Apr 70
(from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A333 F)

Translation: This Author's Certificate introduces a frequency meter with magnetic tuning and panoramic display which contains a reference frequency oscillator, a ferrite resonator, a current generator for magnetizing the resonator, a detector head, detector current amplifier and frequency display module. As a distinguishing feature of the patent, the accuracy of the proposed meter is improved by connecting the input of the SHF detector in the frequency display module to the ferrite resonator, and connecting the output through an amplifier and electronic commutator to a pulse voltmeter.
E. L.

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USSR

UDC: 621.396.6-181.5

BRITSIS, A. B., GOTLIB, D. S., KRUCHAN, Ya. Ya., OZOLS, K. K., and
SHARLOVSKIY, B. V.

"Investigating the Characteristics of Thin Film Contact Areas for
Hybrid Integrated Circuits"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic
Engineering, Scientific-Technical Collection, Microelectronics)
1970, No. 2(23), pp 20-27 (from RZh-Radiotekhnika, No. 3, March 71,
Abstract No. 3V330)

Translation: It is shown that copper films can be used instead of
gold as the conducting layer of contact areas for hybrid micro-
circuits when the assembly is sealed. Resume

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- 107 -

AN0012152

UR9019

AUTHOR-- OZOLS, V., CHIEF METROLOGIST, ACADEMY OF SCIENCES OF
THE LATVIAN SSR

TITLE-- METROLOGY-- PRECISION AND RELIABILITY OF RESEARCH

NEWSPAPER-- SOVETSKAYA LATVIYA, JANUARY 18, 1970, P 2, COLS 5-8

ABSTRACT-- THE ARTICLE GIVES A BRIEF REVIEW OF THE METROLOGICAL SERVICE AT THE LATVIAN ACADEMY OF SCIENCES. THE METROLOGICAL GROUP OF THE PHYSICAL-ENERGETICS INSTITUTE OF THE ACADEMY FABRICATES NEW OR REMODELS OLD INSTRUMENTS ON ORDERS FROM LABORATORIES, STUDIES INFORMATION ON THE STATE OF THE ART IN THE SOVIET UNION AS WELL AS ABROAD, AND DEVELOPS REQUESTS FOR NEW EQUIPMENT.

AT THE INSTITUTE OF ELECTRONICS AND COMPUTATION EQUIPMENT, DIRECTED BY M. EYKHE, THERE IS A GROUP FOR MEASURING DEVICES. IT IS RESPONSIBLE FOR THE INSPECTION AND REPAIRS OF THE INSTRUMENTS.

THE AUTHOR CONCLUDES THAT, AS A WHOLE, THE STATE OF THE METROLOGY ART IN THE REPUBLIC LEAVES MUCH TO BE DESIRED.

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Industrial

UDC 532.72;669.015.23

USSR

PAAL', L. L., KHYAYAL', K. R.

"On the Hydraulic Essence of Turbulent Diffusion Coefficients"

Tr. Tallin. politekhn. in-ta (Works of Tallin Polytechnical Institute), 1972, No. 330, pp 11-20 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B999)

Translation: The turbulent diffusion process in flow in open channels is considered. Experimental data is used to analyze the turbulent diffusion coefficient in the longitudinal direction k_x as a function of various parameters (hydraulic radius R , friction rate λ , and average velocity v_{cp}). The following formulas were obtained from processing experimental data:

$$k_x R^{-1} \lambda^{-1} = 34.060 (R v_{cp} / \nu)^{-0.5}, \quad k_x R^{-1} \lambda^{-1} = 16 (v_{cp} / u_*')^{1.25}$$

USSR

PAAL', L. L., KHYAYAL', K. R., Tr. Tallin. politekhn. in-ta, 1972, No. 330,
pp 11-20

The first formula is valid for artificial channel flows with low roughness and
the second is suitable for natural channel flows with high roughness. Also
analyzed are specific data referring to the coefficient of turbulent diffusion
in the transverse direction. 10 ref. V. R. Kuznetsov.

UDC: 621.396.62:621.396.97

USSR

PABST, B.

"Troubleshooting Transistorized Radio Receivers"

Opredeleniye neispravnostey tranzistornykh radiopriyemnikov (cf. English above), Moscow, "Energiya", 1970, 232 pp, ill. 1 r. 17 k. (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D3 K)

Translation: Methods are considered for checking transistors, dry batteries, measuring currents and voltages in transistorized receivers, and also finding and repairing failures in them. Methods of adjusting receivers are described. Annotation.

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- 126 -

1/3 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SPECTROPHOTOMETRIC DETERMINATION OF COPPER WITH PICRAMINE M -U-
AUTHOR--(03)-KINEEVA, V.A., PACHADZHANOV, D.N., YUSUPOV, M.YU.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK TADZH. SSR 1970, 13(2), 37-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--COPPER, METAL CHEMICAL ANALYSIS, SPECTROPHOTOMETRIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/0082 STEP NO--UR/0425/70/013/002/0037/0039
CIRC ACCESSION NO--AT0122769

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/3 012

CIRC ACCESSION NO--AT0122769

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PICRAMINE M (I) GIVES A BLUE 1:1 COMPLEX WITH CU PRIME2 POSITIVE AT PH 1.3-1.8; 6 ML 0.01PERCENT I SOLN. IS NEEDED FOR A 50,ML SAMPLE CONTG. IS LESS THAN OR EQUAL TO MUG CU. THE ABSORPTION MAX. OF I AND THE COMPLEX (MOLAR ABSORPTIVITY 3.1 TIMES 10 PRIME4) ARE AT 560 AND 640 NM, RESP. THE CALIBRATION CURVE IS LINEAR AT 0.04-0.85 MUG CU-ML. ZN (1500), CD (1000), MG (1000), PB (2500), CO (100), NI (50), BI (10), CA (20), AND AL (10) (VALUES OF PERMISSIBLE EXCESSES GIVEN) DO NOT INTERFERE, WHILE FE PRIME3 POSITIVE, FE PRIME2 POSITIVE, TI PRIME4 POSITIVE, SN PRIME2 POSITIVE, AND TRILEN 8 INTERFERE CONSIDERABLY. A GEOL. SAMPLE (0.5-1G) IS TREATED WITH A MIXT. OF 10 ML EACH HNO SUB3 AND HF IN A PT CRUCIBLE WITH HEATING H SUB2 U BATH, AND EVAPD. TO DRYNESS. AFTER THIS PROCESS IS REPEATED, 4-5 ML H SUB2 SO SUB4 IS ADDED AND THE MIXT. IS HEATED TO RELEASE DENSE WHITE VAPORS. AFTER COOLING, 5 ML H SUB2 O IS ADDED, THE MIXT. IS EVAPD. AND FURTHER HEATED TO WHITE VAPORS. THE RESIDUE IS HEATED WITH 20 ML 1:1 HCL IS FILTERED. ACCORDING TO THE CU CONTENT, 1-10 ML OF FILTRATE IS EVAPD., THE RESIDUE IS DISSOLVED IN 10 ML 0.01N HCL, AND CU IS EXTG. TWICE FOR 3 MIN BY SHAKING WITH 10 ML 0.001PERCENT DITHIZONE SOLN. IN CCL SUB4. THE EXT. IS EVAPD., 1 ML EACH H SUB2 SO SUB4 AND HCLP SUB4 ARE ADDED, THE MIXT. IS HEATED TO DECOLORIZE THE SOLN., EVAPD., AND HEATED TO WHITE VAPORS. THE RESIDUE IS DISSOLVED IN 5 ML H SUB2 O, 1.5 ML AQ. 0.04PERCENT I IS ADDED, THE MIXT. IS DILD. TO 50 ML WITH A PH 1.4 BUFFER. (HCL AND KCL), AND MEASURED AT 640 NM IN A 2-CM CELL.

3/3 031

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0122769

ABSTRACT/EXTRACT--TO PREP. A CALIBRATION CURVE, 1.5 ML 0.04% I IS ADDED TO
A STD. SOLN. CONTG. 2-40 MICROGRAMS CU AND DILD. TO 50 ML WITH THE BUFFER.
DOWN TO 10 TO THE MINUS 3 POWER % CU IN 0.5-1-G SAMPLE CAN BE DETD.
(INST. KHIM., DUSHANBE, USSR)

UNCLASSIFIED

P
AA0052671

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent, 2/70

243751

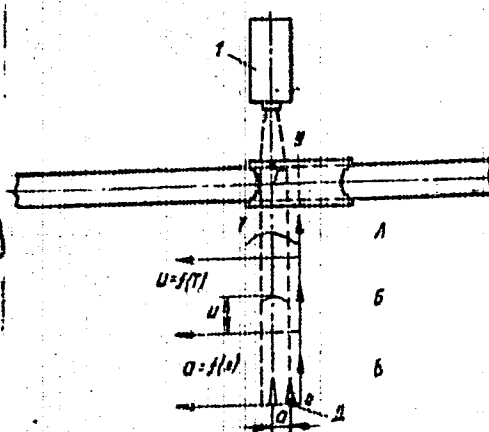
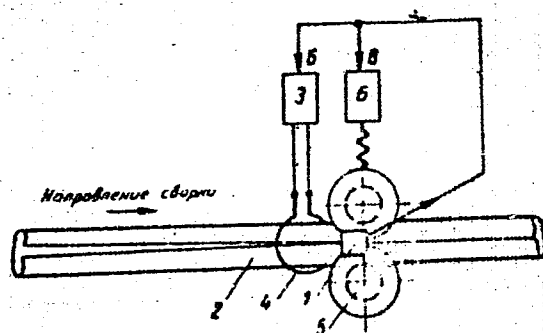
TUBE WELDING CONTROL monitors the temperature of the edges of the joints at a certain point between an HF coil and a pair of upsetting rollers by a scanning photoelectric pyrometer. The maximum temperature is turned into a signal to control the power of the HF heating coil, and the distance at which it occurs from the centre of the upsetting rollers is used as a signal to control the amount of upset by displacing the rollers relative to each other.

13.7.67 as 1173535/25-27 I.V. KIRDO et al. E.O.
Paton Electric Welding Inst. (1.10.69) Bul. 17/
14.5.69. Class 21h, Int. Cl. B 23k.

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Kirdo, I. V.; Pachentsev, I. V.; ~~Pachentsev, Yu. A.~~
Skachko, Yu. N.
Institut Elektrosvarki im. Ye. O. Patona
19821429

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UDC 547.574+547.26'118

USSR

KOZLOV, N. S., PAK, V. D., GMALET, V. G., Perm Agricultural Institute

"Synthesis of Organophosphorus Compounds Based on Azomethynes"
 XI. Study of the Reactions of Schiff's Bases with Phenyl Phosphate

Leningrad, Zhurnal Obshchei Khimii, Vol 40, No 6, Jun 70, pp 1217-1219

Abstract: Phenyl phosphate was made to react with various alkylidenearylamines, such as butyldeneaniline, heptyldeneaniline. The following products of the type $(RCH=NHR')^+O^-P(:O)(OH)OC_6H_5$ were obtained (R and R' given): C_6H_5 , C_6H_5 ; C_6H_5 , p- $C_6H_4CH_3$; C_6H_5 , m- $C_6H_4CH_3$; C_6H_5 , o- $C_6H_4CH_3$; C_6H_5 , p- C_6H_4COOH ; C_6H_5 , o- C_6H_4COOH ; C_6H_5 , m- C_6H_4COOH ; C_6H_5 , p- $C_6H_4COOCH_3$; C_6H_5 , p- $C_6H_4COOC_2H_5$; C_6H_5 , o- C_6H_4Cl ; p- $CH_3OC_6H_4$, C_6H_5 ; p- $NO_2C_6H_4$, C_6H_5 ; p- $NO_2C_6H_4$, p- $C_6H_4CH_3$; p- $CH_3OC_6H_4$, p- $C_6H_4CH_3$; C_3H_7 , C_6H_5 , $CH_3(CH_2)_5$, C_6H_5 . These compounds are white, crystalline, soluble in water, alcohol, dioxane, and dimethylformamide. They dissolve partially in benzene, but they are insoluble in diethyl ether or petroleum ether. Their IR spectra have a broad band at 2600 cm^{-1} , which is characteristic for the $>NH$ group. As is the case with all amine salts, these compounds are hydrolyzed in alkali to the corresponding azomethynes and the metal phenyl phosphate. The temperature dependence of the hydrolysis constant of

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USSR

KOZLOV, N. S., et al, Zhurnal Obshchei Khimii, Vol 40, No 6, Jun 70, pp 1217-1219

these compounds was studied. It was found also that electronegative substituents at the benzene ring of the amine moiety increase the hydrolysis rate, whereas electropositive substituents decrease it. Substituents at the benzene group of the aldehyde moiety do not exhibit such an effect on the hydrolysis rate.

2/2

- 35 -

AA0052671

UR 0482

Soviet Inventions Illustrated, Section I Chemical, Derwent,

243751 TUBE WELDING CONTROL monitors the temperature of the edges of the joints at a certain point between an HF coil and a pair of upsetting rollers by a scanning photoelectric pyrometer. The maximum temperature is turned into a signal to control the power of the HF heating coil, and the distance at which it occurs from the centre of the upsetting rollers is used as a signal to control the amount of upset by displacing the rollers relative to each other.

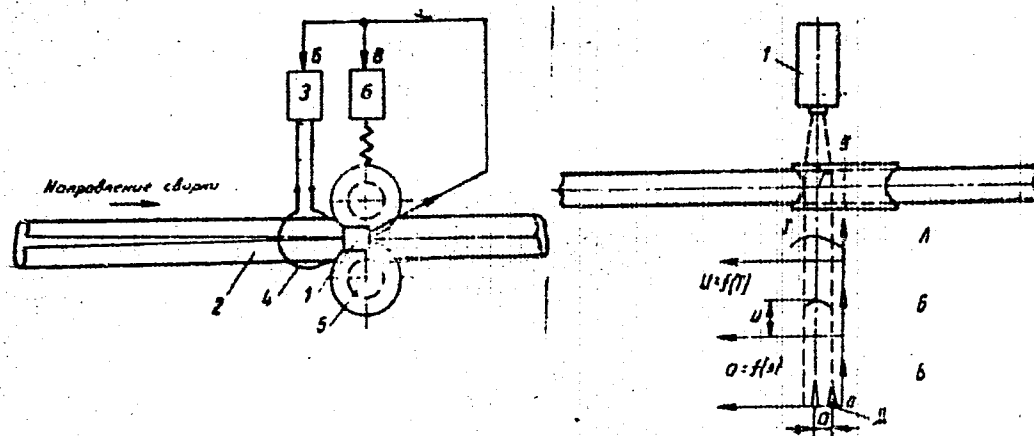
13.7.67 as 1173535/25-27 I.V. KIRDO et al. E.O.
Paton Electric Welding Inst. (1.10.69) Bul. 17/
14.5.69. Class 21h, Int. Cl. B 23k.

Kirdo, I. V.; Pachentsev, I. V.; Pachentsev, Yu. A.;
Skachko, Yu. N.

Institut Elektrosvarki im. Ye. O. Patona

19821429

AA0052671



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19821430

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1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE SURGICAL TREATMENT OF REGIONAL METASTASES OF CANCER OF THE
UPPER RESPIRATORY TRACT -U-
AUTHOR-(03)-PACHES, A.I., FALILEYEV, G.V., MATYAKIN, YE.G.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 3, PP 72-76
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SURGERY, METASTASIS, CANCER, RESPIRATORY SYSTEM, LYMPHATIC
SYSTEM, VEIN, NERVE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1250 STEP NO--UR/0607/70/000/003/0072/0076
CIRC ACCESSION NO--AP0107726
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0107726

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER PRESENTS A DESCRIPTION OF THE OPERATION OF FACIAL SHEATH REMOVAL OF THE CELLULAR TISSUE OF THE NECK IN METASTASES OF MALIGNANT TUMORS OF THE UPPER RESPIRATORY TRACT. ITS ADVANTAGE OVER CRILE'S OPERATION CONSISTS IN THAT IT PRESERVES THE INTERNAL JUGULAR VEIN, THE STERNOCLEIDOMASTOID MUSCLE AND ACCESSORY NERVE. THIS PRODUCES BETTER FUNCTIONAL AND COSMETIC RESULTS. THIS TYPE OF OPERATION MAY BE PERFORMED IN CLINICALLY OBSCURE METASTASES OR MOBILE LYMPH NODES NONADHERED TO THE MUSCLE AND VEIN. THE OPERATION MAY BE EFFECTED SIMULTANEOUSLY FROM BOTH SIDES. THIS TYPE OF OPERATION BY ITS RADICAL CHARACTER IS NOT INFERIOR TO CLILE'S OPERATION. FROM 1965 THE AUTHORS PERFORMED 117 SUCH OPERATIONS IN 104 PATIENTS WERE FOLLOWED UP (28 OF THEM OVER THREE YEARS)-RELAPSES OF REGIONAL METASTASES WERE NOTED IN 7.4 PER CENT OF CASES. FACILITY: OTD. OPUKHOLEY GOLOVY I SHEI INSTITUTA EKSPERIMENTAL'NOY I KLINICHESKOY ONKOLOGII AMN SSSR AND KAFEDRY ONKOLOGII TSENTRAL. INST. USOVERSHENSTVOVANIYA VRACHEY.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--MELANOMA OF THE SKIN OF THE HEAD AND NECK -U-
AUTHOR-(02)-NIVINSKAYA, M.M., PACHES, L.R.
COUNTRY OF INFO--USSR
SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 43-45
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SKIN DISEASE, ONCOLOGY, BIOLOGIC PIGMENT, RADIOTHERAPY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0082 STEP NO--UR/0511/70/049/003/0043/0045
CIRC ACCESSION NO--AP0120782
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120782

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SUMMARY. THE PAPER DEALS WITH CLINICAL OBSERVATIONS OVER 179 PATIENTS WITH MELANOMA OF THE SKIN OF THE HEAD AND NECK. OF THIS NUMBER IN 150 PERSONS THERE WAS SEEN MELANOMA OF THE SKIN TEGUMENTS, IN 22, OF THE ORGAN OF VISION, IN 7, OF THE ORAL AND NASAL MUCOUS MEMEBRANE. THE FEATUKES PECULIAR TO THE CLINICAL COURSE OF THE DISEASE AMONG PATIENTS WITH DIFFERENT MALIGNANT NEOPLASMS OF THE SKIN OF THE HEAD AND NECK ARE DISCUSSED IN DETAIL. AN ANALYSIS OF THE REMOTE RESULTS OF TREATMENT IN PATIENTS SUBJECTED TO RADIATION AND COMBINED THERAPY IS GIVEN. A FIVE YEAR RECOVERY IN RADIATION THERAPY WAS OBTAINED IN 58.3 PER CENT AND IN THE COMBINED METHOD, IN 73 PER CENT CASES. THE DATA PRESENTED GIVE GROUNDS TO AGGREE WITH THE EXISTING VIEWS ON THE RELATIVELY LESS MALIGNANT COURSE OF MELANOMA OF THE REFERRED TO LOCALIZATION. THE REMOTE RESULTS OF COMBINED TREATMENT MAKES IT POSSIBLE TO CONSIDER IT AS THE METHOD OF CHOICE. FACILITY: OTDEL RADIOLOGII INSTITUTA EKSPERIMENTAL'NOY I KLINICHESKOY ONKOLOGII AMN SSSR, MOSCOW.

UNCLASSIFIED

USSR

DEMIDENKO, I. I.; LOMINO, N. S.; PADAIKA, V. G.

"Plasma Current in a Strong Transverse Magnetic Field"

Leningrad, Zhurnal Tekhnicheskoy Fiziki; July, 1971; pp 1392-9

ABSTRACT: Characteristics of the motion of a plasma current across an inhomogeneous transverse magnetic field of fairly high intensity were studied. It is shown that in a strong magnetic field a complete cessation of the injected jet and its reflection from the magnetic barrier occurs. The occurrence of a polarized interaction of the injected and reflected currents is the cause of the development of an instability and entrapment of the plasma in the direction of the lines of force of the magnetic field.

The article includes 6 equations and 7 figures. There are 26 references.

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- 65 -

USSR

UDC 612.014.426

MINTS, S. M., PADALKA, Ye. S., and LAZAROVICH, V. G., Department of
Pathological Physiology, Ivano-Frankovsk Medical Institute

"Effect of a Superhigh-Frequency Electromagnetic Field on the Metal and
Metalloprotein Content of Animal Organs and Tissues"

Moscow, Biologicheskkiye Nauki, No 2, 1973, pp 46-49

Abstract: Rats were treated daily for 28 days with a superhigh-frequency electromagnetic field to determine changes in the content of metals and metal-containing proteins in various organs and tissues. In the 1st 14 days the iron content of blood serum transferrin decreased but then rose to twice normal by the 28th day. Iron decreased in blood and muscles and increased in bones and liver. Ceruloplasmin activity fluctuated throughout the experiment. Copper content in blood and bone was heightened throughout the experiment. It rose in the liver by the 7th day, and remained high in muscle until the 21st day. Zinc increased in blood and on the 7th and 21st days in bone, while it decreased in the liver and muscles. Cobalt decreased sharply throughout the experiment in blood, liver, and bone, while reduction in muscles occurred only on the 14th day. Thus an electromagnetic field causes considerable shifts in metal distribution. This may be the reason for sensitivity of blood formation

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- 63 -

USSR

MINIS, S. M., et al., Biologicheskiye Nauki, No 2, 1973, pp 46-49

to electromagnetic fields. It is suggested that redistribution is affected by disruption of vessel-tissue permeability and may be involved in changes of nucleic acid metabolism and redox processes previously noted in response to superhigh-frequency electromagnetic fields.

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USSR

UDC 591.1.15

MINTS, S. M., PADALKA, YE. S., and LAZAROVICH, V. G.

"Influence of Super-High-Frequency Electromagnetic Field on the Content of Metals and Metal Proteides in Animal Organs and Tissues"

Nuach. dokl. vyssh. shkoly. Biol. n. (Scientific Reports of the Higher School) No 2, 1973, pp 46-49 (from RZh-Biologicheskaya Khimiya, No 12, Jun 73, Abstract No 12 F 1403)

Translation: Experiments on 55 rats revealed that protracted, general exposure to super-high-frequency electromagnetic fields alters the content of iron, copper, cobalt and zinc in animal organs and tissues and also alters the activity of metal proteides of perulic plasmin and the degree of saturation of the transferrin of the blood serum with iron.

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57

USSR

UDC 615.216.5.076:612.816

GIGAURI, V. S., PADALKO, V. V., MIRONOVA, Z. P., and POPOVA, YE. B., Department of Experimental Surgery, Scientific Research Institute of Clinical and Experimental Surgery, and Chair of Pathological Physiology, First Moscow Medical Institute imeni I. M. Sechenov

"Control of the Degree of Muscle Relaxation"

Moscow, Khirurgiya, Vol 3, Mar 71, pp 101-104

Abstract: Muscle relaxation during surgery is of paramount importance. The amount of muscle relaxants administered should be large enough to prevent re-appearance of muscle tonus and twitches during surgery, but it should not be so large as to complicate postoperative recovery. Since the degree of muscular relaxation is judged by clinical signs, we decided to investigate whether electromyographic records representing transmission across neuromuscular junctions might not be a more objective and precise index of the degree of muscular relaxation. For this purpose, tests were done on laboratory dogs anesthetized with modern anesthetics. Electromyograms were recorded continuously and a record of clinical signs was kept while muscle relaxants (Ditiline and Tubarine) were administered in definite doses at definite time intervals. The results showed no correlation between the clinical signs of muscular

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USSR

GIGAURI, V. S., et al., Khirurgiya, Vol 3, Mar 71, pp 101-104

relaxation and the magnitude of the electromyograms which fluctuated at random between 0 and 88%. Evidently, synaptic conductivity in peripheral muscles reflects only the local effect of the relaxants but not the relaxation of the body as a whole. Therefore, the clinical signs of muscular relaxation must still be relied upon, though they may be used in conjunction with other parameters, including electromyograms.

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USSR

UDC 619:614.9-07:637.5

PADALKIN, I. Ya., Voronezh Agricultural Institute

"Clostridium perfringens Contamination of Meat"

Moscow, Veterinariya, No 8, Aug 70, pp 103-104

Abstract: The incidence of contamination of meat with Clostridium perfringens was studied, and some biological properties of this microbe were determined. Bacteriological tests were conducted on meat samples obtained from carcasses of cows and hogs after forced slaughter. Cl. perfringens was isolated mainly from muscles forming the abdominal wall, and the culture was nonpathogenic. In only one case was Cl. perfringens isolated from all of the muscle groups of a cow; the culture was pathogenic for white mice. Neutralization with specific, antitoxic serum revealed that the pathogenic culture consisted of type A Cl. perfringens. Though meat is a good medium for the growth of microflora, Cl. perfringens does not readily form its heat-resistant spores in meat. After contaminated meat is cooked for 30 minutes at 80°C, no cultures of Cl. perfringens can be grown. Some nonpathogenic strains present in meat survive even after the meat is cooked for over 2 hours. It is possible that pathogenic, thermoresistant forms of type A Cl. perfringens occur in meat, but evidently not as often as the saprophytic forms. Nevertheless, from the sanitary viewpoint, meat contaminated with Cl. perfringens is unsafe because it may contain the pathogenic strains of this microbe.

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Acc. Nr:
AP0045618

Ref. Code: UR 0463

PRIMARY SOURCE: Molekulyarnaya Biologiya, 1970, Vol 4, Nr 1,
pp 37-44 *P*

THE ROLE OF PROTEIN SYNTHESIS IN THE UV-INDUCTION
OF COLICINOGENIC FACTOR EI IN *E. COLI*

Likhoded, V. G.; Padalko, T. B.; Sayenko, A. S.;

Tolcheyev, Yu. D.

Institute for Vaccines and Sera Research, Ministry of Health,
of the USSR, Moscow and Institute of Medical Radiology,
Academy of Medical Sciences, Obninsk, USSR

The role of protein synthesis in UV-induction of colicinogenic factor EI was investigated. UV-induction was shown to depend on the presence of some protein(s) synthesized prior to UV-irradiation. During a lag period after irradiation protein synthesis was not required for UV-induction of colicinogenic factor. In new infected cells UV-induction and zygotic induction were shown to depend on protein synthesis just after the transfer of colicinogenic factor.

REEL/FRAHE

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1/2 024 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--CHANGES IN THE SYMPATHETIC AND PARASYMPATHETIC REACTIONS IN
NEUROLEPTOANALGESIA WITH MYORELAXANTS AND ARTIFICIAL VENTILATION OF THE
AUTHOR--(03)-PADALKO, V.V., KHITROV, N.K., DEMUROV, YE.A.

COUNTRY OF INFO--USSR

SOURCE--EKSPERIMENTAL'NAYA KHIRURGIYA I ANESTEZIOLOGIYA, 1970, NR 2, PP
72-76
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MUSCLE RELAXANT, ARTIFICIAL RESPIRATION, HYPOTENSION, DRUG
ANALGESIC EFFECT, CURARE DRUG EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0639

STEP NO--UR/0481/70/000/002/0072/0076

CIRC ACCESSION NO--AP0108850

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--090CT70

2/2 024

CIRC ACCESSION NO--AP0108950

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. UNDER NEUROLEPTOANALGESIA WITH MYORELAXANTS AND ARTIFICIAL VENTILATION OF THE LUNGS A COMPLEX REARRANGEMENT OF FUNCTIONING OF THE ADREN AND CHOLINERGIC APPARATUS OF CARDIOVASCULAR CONTROL TAKES PLACE. NLA PRODUCES HYPOTENSION AND TACHYCARDIA, DECREASES SENSITIVITY OF ALPHA AND BETA ADRENORECEPTORS AND INCREASES ACTIVITY OF M CHOLINERGIC STRUCTURES. MYORELAXANTS OF BOTH TYPES WITH NLA DO NOT AFFECT THE BLOOD PRESSURE, BUT DECREASE TACHYCARDIA. LYSTENON UNDER ABOVE CONDITIONS INCREASES SENSITIVITY OF BETA ADRENORECEPTORS, WHILE TUBOCURARIN ACTS IN A SIMILAR MANNER OF ALPHA ADRENORECEPTORS. THE AUTHORS SUGGEST THAT THE ABOVE EFFECTS OF TALAMONAL AND RELAXANTS ARE DUE TO CHANGES IN THE MEDIATOR METABOLISM.

FACILITY: KAFEDRA PATOLOGICHESKOY FIZIOLOGII I MOSKOVSKOGO MEDITSINSK. INSTITUTA IM. I. M. SECHENOVA.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--QUALITATIVE INDICES OF THE WORK OF DEPARTMENTS OF ORTHOPEDIC
STOMATOLOGY -U-
AUTHOR--PADARYAN, I.S.
COUNTRY OF INFO--USSR
SOURCE--STOMATOLOGIYA, 1970, VOL 49, NR 3, PP 75-78
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DENTISTRY, ORTHOPEDIC SURGERY, DIAGNOSTIC MEDICINE, STATISTIC
ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0072 STEP NO--UR/0511/70/049/003/0075/0078
CIRC ACCESSION NO--AP0120772
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120772

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SUMMARY. QUANTITATIVE ANALYSIS OF STATISTICAL DATA IS THE LOGICAL AND OBLIGATORY CONTINUATION OF ASSESSING THE ACTIVITY OF A THERAPEUTIC INSTITUTION. THE ELABORATION OF QUALITATIVE INDICES CREATES CONDITIONS FOR JUDGING OF THE SHIFTS BOTH IN THE WORK DEPARTMENTS OR ORTHOPEDIC STOMATOLOGY AND SEPARATE PHYSICIANS. THE ASSESSMENT OF QUALITATIVE INDICES COMPILED BY DENTISTS ENABLES TO JUDGE INDIRECTLY THE ORGANIZATIONAL LEVEL OF ORTHOPEDIC ACID. FACILITY: POLIKLINIKA IM. F. E. DZERZHINSKOGO MINISTERSTVA ZORAVOOKHRANIYA RSFSR, MOSCOW.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DOG AS A SPONTANEOUS CARRIER OF LAMBLIA AND PROBABLE SOURCE AND
VECTOR OF LAMBLIASIS IN NATURE -U-
AUTHOR-(02)-PADCHENKO, I.K., STOLYARCHUK, N.G.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK ZOOLOGII, 1970, NR 3, PP 55-61
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ANIMAL PARASITE, DOG, SMALL INTESTINE, DUODENUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/0651 STEP NO--UR/0575/70/000/003/0055/0061
CIRC ACCESSION NO--AP0128188
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128188

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE RESULTS OF EXPERIMENTAL INVESTIGATIONS CARRIED OUT IN PUPPIES 1.5-4 MONTH OLD TESTIFY TO THE FACT THAT A DOG IS SUSCEPTIBLE TO BOTH SPONTANEOUS AND EXPERIMENTAL LAMBLIASIS EVOKED BY THE CYSTS OF DOG LAMBLIA CANIS AND HUMAN L. INTESTINALIS. EXPERIMENTAL INVASION CAUSED BY THE CYSTS OF L. INTESTINALIS ALSO ACTIVATES THE ASYMPTOMATIC SPONTANEOUS LAMBLIASIS IN DOGS. DURING SPONTANEOUS AND EXPERIMENTAL LAMBLIASIS IN DOGS, THE VEGETATIVE FORMS OF LABLIA ARE LOCALIZED IN VARIOUS AREAS OF DUODENUMS AND SMALL INTESTINES; WITH PARTICULARLY GREAT AMOUNT OF THEM BEING IN THE MIDDLE AREA OF SMALL INTESTINE. FACILITY: KIYEVSKIY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT EPIDEMIOLOGII, MIKROBIOLOGII I PARAZITOLOGII.

UNCLASSIFIED

Pesticides

USSR

UDC: 632.954.615.9.003.12

~~PADEMOV, K.P.~~, Minsk Test Station of the All-Union Institute of Plant Protection,
All Union Academy of Agricultural Sciences imeni V.I. Lenin

"Estimating Toxicity of New Herbicides For Weeds"

Moscow, Khimiya v Sel'skim Khozyaystve, No 2, 1970, pp 52-53

Abstract: The method proposed for counting weeds in tests of herbicide effectiveness markedly cuts time and labor and yields results differing by no more than 10% from standard tests. Essentially, the method consists of visual estimation by scale divisions of the number of weed plants in small record plots (not less than ten record plots 0.1 square meter in size) using the following scale:

Scale Divisions	Number of Weeds in Test Plot	Mean Value of Readings
1	< 10	5
2	11-30	20
3	31-50	40
4	51-70	60
5	> 70	80

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USSR

UDC 669.0-154.046.56:536.7

FILIPPOV, S. I., and PADERIN, S. N., Moscow Institute of Steel and Alloys

"Theoretical Foundations of Deep Carbon Oxidation in Metallic Melts"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya,
No 8, Aug 73, pp 15-20

Abstract: The possibilities of refining a melt of complex composition and determining the physical and chemical principles of deep oxidation of impurities in the oxidizing period of melting were investigated. The thermodynamic equations for calculation of the minimum amount of carbon for a maximum amount of oxygen in relation to temperature are given. These equations indicate how to achieve maximum decarburization of heats. Melting tests were conducted in five-ton arc furnaces from which it was possible to quantitatively evaluate the kinetic characteristics and to reveal the optimum conditions of the oxidation period during melting with the purpose of developing new smelting technology, especially for low-carbon alloyed steel in open arc furnaces. Three figures, ten bibliographic references.

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USSR

UDC 616.981.25-092.9

ANATOLIY, S. A., ANTONOVSKAYA, I. I., TASK, S. Ya., and PADERINA, Ye. M.,
Institute of Experimental Medicine, Academy of Medical Sciences USSR,
First Leningrad Medical Institute imeni Akad. I. P. Pavlov, and Leningrad
Sanitary-Hygiene Medical Institute

"Comparison of Some Experimental Models of Staphylococcal Infection"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971,
pp 60-63

Abstract: A comparison of four models of staphylococcal infection -- intra-orbital, intravenous, intraperitoneal, and intranasal -- showed that mice inoculated in the first two modes died within 9 to 12 hours, while those inoculated in the last two modes died 3 to 5 days later. The rapid death and disappearance of Staphylococci in the animals inoculated intraperitoneally or intranasally indicate a toxic process, whereas the longer survival time of the animals inoculated intraorbitally or intravenously point to a true infectious process. The latter two models are, therefore, to be preferred when studying the virulence of Staphylococci, immunity to these microorganisms, and pathogenesis of generalized infection.

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USSR

UDC: 519.21

KAYDANOV, Yu. L., PADERNO, V. I., SAPRYKIN, V. A.

"On the Problem of Describing Random Anisotropic Fields"

V sb. Metody predstavleniya i apparaturn. analiz sluchayn. protsessov i poley. 3-y Vses. simpozium Sekts. 2 (Methods of Representation and Instrumental Analysis of Random Processes and Fields. Third All-Union Symposium. Section 2), Leningrad, 1970, pp 27-29 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V149)

Translation: Let $R(\vec{x}, \vec{y})$ ($\vec{x}, \vec{y}$ are points in an n -dimensional Euclidean space R^n) be a correlation function of the random field

$$\psi(\vec{x}) = \exp \{ - \langle A\vec{x}, \vec{x} \rangle \} \int_{R^n} n(\vec{y}) K(\vec{x} - \vec{y}) d\vec{y}$$

where $n(\vec{y})$ is "white" noise on R^n .

$$K(\vec{x}) = F^{-1} \{ \exp [- \langle B\Lambda^{-1}(\vec{\omega} - \vec{\Omega}), \Lambda^{-1}(\vec{\omega} - \vec{\Omega}) \rangle] \},$$

F^{-1} is an inverse Fourier transform operator, A and B are positively defined matrices, Λ is a diagonal matrix with elements $\Omega_1, \dots, \Omega_n$. An algo-

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- 18 -

KAYDANOV, Yu. L. et al., Metody predstavleniya i apparaturn. analiz sluchayn. protsessov i poley. 3-y Vses. simposium. Sekts. 2, Leningrad, 1970, pp 27-29

rithm is discussed for construction of eigenfunctions and eigenvalues of the correlation kernel $R(\tilde{x}, \tilde{y})$ on $R^N \times R^N$. M. Yadrenko.

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USSR

UDC 621.912-492.2

BEZYKORNOV, A. I., BOGOMOLOV, N. I., GURINCHUK, I. I., KOVAL'CHENKO, M. S.
KONOVALOVA, Ye. S., and PADERNO, Yu. B., Institute of Problems of Material
Science, Academy of Sciences of the USSR

"Investigation of the Form, Durability, and Abrasive Ability of Grains of
Refractory Compound Powders"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 65-69

Abstract: The results are presented of an investigation of the form, strength,
and abrasive properties of powders of fused titanium and niobium carbides and
calcium boride, in comparison with certain data on synthetic corundum. The
results show that the deviation from grain isometricity of niobium carbide is
larger than that of titanium carbide; that the strength of niobium and titanium
carbides with a grain size of more than 250 μ is higher than that of calcium
boride and white synthetic corundum grains, while at smaller grain sizes the
opposite is true. The compounds considered here may be ordered with respect
to their increasing abrasive power, beginning with synthetic corundum: EB-NbC-
TiC-CaB₆ = 1-1.18 - 1.36 - 1.88.

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- 47 -

USSR

UDC 611.839+615.361.814.3]:359.6

POLOZHENTSEV, S. D., Lt Col Med Serv, Candidate of Medical Sciences, PADKIN, V. V., Lt Col Med Serv, Candidate of Medical Sciences, NAUMOV, G. M., Lt Col Med Serv, and MAKHNENKO, A. A., Maj Med Serv.

"The State of the Sympatho-Adrenal System in Sailors During Long-Term Cruises"

Moscow, Voenno-Meditsinskiy Zhurnal, No 6, 1973, pp 56-57

Abstract: Determinations of urinary excretion of catecholamines were performed on two groups of sailors. In the first group comprising 28 men, noradrenaline excretion was moderately increased (39 units/min) and adrenalin excretion decreased (7) prior to sailing, corresponding to the general emotional excitation of anticipation. During the second half of cruising when adaptation to the changed surroundings was achieved, noradrenalin excretion increased to 67.6 while adrenalin excretion remained unchanged (6.9). Immediately after completion of the cruise, noradrenalin excretion fell to 31.6 while adrenalin excretion rose to 13.6. The second group comprising 21 men repeatedly sailed from one climate zone into another. During the first half of cruising, excretion of both catecholamines was elevated to about 40, indicating exposure to severe stress. In the final period of cruising when marked fatigue was observed in most

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USSR

POLOZHENTSEV, S. D., et al., Voenno-Meditsinskiy Zhurnal, No 6, 1973, pp 56-57

sailors, excretion of noradrenalin fell to 9.2 and that of adrenalin to 12.4. Immediately after completion of the cruise, noradrenalin excretion rose to 24.6 while adrenalin excretion further fell to 3.8. The figures indicate a dissociation between the activities of the adrenal medulla and the sympathetic nervous system, corresponding to the various periods of adaptation to the changing external conditions.

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- 48 -

USSR

UDC: 8.74

KOREL'SKAYA, T. D., PADUCHEVA, Ye. D.

"On the Formal Apparatus of Syntactic Transformations"

V sb. Issled. po mat. lingvist. i inform. yazykam (Research on Mathematical Linguistics and Information Languages--collection of works), Moscow, "Nauka", 1972, pp 27-58 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V704)

Translation: A syntactic representation of a sentence includes the following three objects: 1) a tree of relations of the sentence in which the junctions are marked by symbols of autonomous lexemes with indices of "semantically" inflectional characteristics while the branches are marked by symbols of types of syntactic relations; 2) information on anaphoric relations (on coreferentiality); 3) information on the linear order of the junctions of the tree, i. e. on word order. An arbitrary syntactic representation is considered which includes (in addition to the components named above): the lexical characteristics of the junctions; information on semantic relations; information on the syntactic role of a given junction.

1/2

USSR

KOREI'SKAYA, T. D., PADUCHEVA, Ye. D., Issled. po mat. lingvist. i inform. yazykam, Moscow, "Nauka", 1972, pp 27-58

tion (e. g. whether the word "which" is directly or indirectly subordinate to a given word), etc. Transformation on the set of syntactic representations "is described directly as a certain set of changes in the syntactic representations, rather than as a substitution" (p 39); such a transformation is given by the pair <condition of applicability, and the transformation proper>, where the condition of applicability is a cliché (that which must be incorporated into the syntactic representation to be transformed) and the negative context of the cliché (an indication of what is not to be in the syntactic representation being transformed). Five elementary transformations are distinguished: 1) addition of a junction; 2) removal of a junction; 3) rebalancing a junction with its sub-tree; 4) change of linear order; 5) change of the relation of anaphorism. I. Mel'chuk.

2/2

USSR

UDC: 669.15.018.29:539.389.2:536.4.

IL'IN, V. P., PADUN, A. N., ANIKAYEV, V. A., URSHANSKIY, A. M., KULALAYEV, Yu. A., SABKO, V. F.

"Study of Thermal Stability of Certain Wear-Resistant Metals"

Progressiv. Sposoby Svarki, Novyye Materialy i Konstruktsii v Svaroch. Proiz-ve [Progressive Methods of Welding, New Materials and Structures in Welding Production -- Collection of Works], Izhevsk, 1973, pp 54-55 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 81509, by V. Bochkareva).

Translation: The thermal stability of two groups of wear-resistant steels was studied. In group I, the C content varied from 0.16 to 0.89%, while the content of the other elements remained constant as follows (in %): Cr 4.0, W 1.0, V 1.0, Mo 10.0. In the steels of group II, the content of C varied from 0.4 to 1.0%, the content of Cr from 5.0 to 10.0%, with the contents of the other elements (in %): Mn 0.35, Si 0.65, W 10.0, V 0.8, Mo 1.4, Ti 0.5. A regression equation is produced to estimate the influence of C and Cr content and tempering temperature on thermal stability of steels of group II. Analysis of this equation shows that within the limits studied, C significantly

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USSR

Il'in, V. P., Padun, A. N., Anikayev, V. A., Urshanskiy, A. M., Kulalayev, Yu. A., Sabko, V. F., Progressiv. Sposoby Svarki, Novyye Materialy i Konstruktsii v Svaroch. Proiz-ve, Izhevsk, 1973, pp 54-55.

reduces, Cr increases the resistance to thermal cracking. The combined influence of C and tempering temperature greatly decreases the thermal stability of group II steels. For the steels of group I, it was established that hardness in the state after casting is increased with increasing C content, while resistance to formation of hot cracks decreases.

USSR

UDC 632.952:633.11

PERESYPKIN, V. F., PADUN, V. I., and PRONCHENKO, T. S., Ukrainian Scientific Research Institute of Plant Protection and All Union Scientific Research Institute of Chemical Plant Protective Agents

"Activity of Novel Fungicides Against the Stimulant of Wheat Smut"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 44-45

Abstract: Under field conditions benzoxan and pentoxan were slightly less active than the standard TMID and granozan as fungicides against wheat smut. There was no difference observed between the standards and test agents as far as seed germination and formation of productive stems was concerned.

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- 45 -

USSR

IMSHENNIK, V. S., PADYOZHIN, D. K., Institute of Applied Mathematics, Academy of Sciences of the USSR

"Neutrino Heat Conduction in Collapsars"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 63, No 5(11), Nov 72, pp 1548-1561

Abstract: Gasdynamic calculations of gravitational stellar collapse show that: 1) the dynamics of collapse is determined to a considerable extent by processes of neutrino emission, the beta (Urca) process playing the pre-dominant part among all mechanisms; 2) at some stage of collapse, the central nucleus of the star becomes opaque to its own neutrino emission. In this paper, neutrino and antineutrino energy and momentum transfer are considered and incorporated into the gasdynamic analysis. A system of equations of neutrino gasdynamics is derived in a heat conduction approximation which is a generalization of the radiant heat conduction of photons taken from radiation gasdynamics. A lepton charge diffusion equation stemming from analysis of the kinetics of β -interactions in a medium of arbitrary nuclear composition is added to this system of equations. The authors calculate all

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USSR

IMSHENNIK, V. S., PADYOZHIN, D. K., Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 63, No 5(11), Nov 72, pp 1548-1561

transfer coefficients for the high-temperature case in which the baryon component of matter is comprised of free nucleons. A spherical-symmetry boundary value problem is formulated for the central nucleus of the star. The authors thank Ya. B. Zel'dovich for interest in the work and constructive criticism, and Yu. S. Kopysov for discussion.

2/2

73 -

1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTION OF CARBON MONOXIDE WITH A GOLD ELECTRODE CATALYST -U-
AUTHOR--(03)-PADYUKOVA, G.L., FASMAN, A.B., SOKOLSKIY, D.V.
COUNTRY OF INFO--USSR
SOURCE--ELEKTROKHIMIYA 1970, 6(4), 505-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CARBON MONOXIDE, CHEMICAL REDUCTION, METAL ELECTRODE,
CATALYST, GOLD, CARBON DIOXIDE, CHEMICAL BONDING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/1155 STEP NO--UR/0364/70/006/004/0505/0506
CIRC ACCESSION NO--AP0121714
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121714

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTERACTION OF CO WITH A 6 CM PRIME2 AU ELECTRODE WAS STUDIED IN N H SUB2 SO SUB4 AT 20-70DEGREES. CHARGING CURVES IN A H ATM. SHOWED THAT H WAS ADSORBED TO SIMILAR TO A 3PERCENT COVERAGE. THE INTRODUCTION OF CO LED TO A SLIGHT SHIFT IN POTENTIAL TOWARD MORE NEG. VALUES, WHICH INDICATED THAT CO DISPLACED H FROM THE AU. CHROMATOGRAPHIC ANAL. SHOWED ONLY A VERY SMALL CONVERSION OF CO, SIMILAR TO 0.15PERCENT, TO CO SUB2. THE DATA INDICATED THAT THERE WAS ONLY A WEAK ATTRACTION BETWEEN AU AND CO. FACILITY: KAZ. GOS. UNIV. IM. KIROVA, ALMA-ATA, USSR.

UNCLASSIFIED

1/3 022 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--MECHANISM OF THE DIENE SYNTHESIS WITH 5,ALKOXYOXAZOLES -U-
AUTHOR--(05)--DROBINSKAYA, N.A., IONOVA, L.V., KARPEISKIY, M.YA., PADYUKOVA,
N.SH., TURCHIN, K.F.
COUNTRY OF INFO--USSR
SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (1), 37-42
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MOLECULAR STRUCTURE, CONDENSATION REACTION, ORGANIC AZOLE
COMPOUND, CHEMICAL SYNTHESIS, ISOMERIZATION, PYRIDINE, CHEMICAL REACTION
MECHANISM, ACETYLENE, ELECTRON DENSITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FILM--1986/1368 STEP NO--UR/0409/70/000/001/0037/0042
CIRC ACCESSION NO--AP0103222
UNCLASSIFIED

2/3 022

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0103222

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HETERODIENE CONDENSATION OF 5, ALKOXYOXAZOLES TAKES PLACE IN TWO STAGES: REACTION OF OXAZOLES WITH DIENOPHILES GIVING UNSTABLE ADDUCTS, AND ISOMERIZATION OF THESE ADDUCTS TO SUBSTITUTED 3, HYDROXYPYRIDINES. THUS, ET BETA, ACETYLACRYLATE (I) REACTS WITH 4, METHYL, 5, ETHOXYOXAZOLE (II) TO GIVE 2, METHYL, 3, HYDROXY, 4, ACETYL, 5, CARBETHOXYPYRIDINE (III) THROUGH THE UNSTABLE ADDUCT .IIIA. THIS MECHANISM IS SUPPORTED BY PI ELECTRON DENSITY CALCNS. FOR I AND II, ACTUAL ISOLATION OF III AS THEIR MAIN REACTION PRODUCT, ITS CHEM. CONVERSION, AND FINALLY BY PMA AND IR STUDIES. REACTIONS BETWEEN II AND BETA, ACETYLACRYLIC ACID (GIVING 2, METHYL, 3, HYDROXY, 5, ACETILPYRIDINE) (IV), AND BETWEEN I AND CYCLOPENTEN, 3, ONE (FORMING 5, METHYL, 4, HYDROXY, 6, AZAHYDRINDEN, 3, ONE) (V) ALSO VERIFIED THIS TYPE OF MECHANISM. THUS, TO A SOLN. OF 17.9 G I IN 20 ML ABS. ET SUB2 O WAS ADDED 8.87 G II, 1 ML ACOH, AND 200 MG HYDROQUINONE, AND THE SOLN. KEPT 1 WEEK AT ROOM TEMP. IN THE DARK TO GIVE 8 G III, M. 151-20DEGREES (HEPTANE). A SOLN. OF 2.5 G II AND 3.42 G BETA, ACETYLACRYLIC ACID IN 40 ML ABS. ET SUB2 O WAS KEPT 5 DAYS UNDER A CALCL SUP2 TUBE TO GIVE 0.64 G IV, M. 253-4DEGREES (DECOMP.) (MEOH). TO A SUSPENSION OF 1.14 G LIALH SUB4 IN 50 ML THF WAS ADDED DROPNISE WITH COOLING 2.1 G III IN 50 ML THF, AND THE MIXT. REFLUXED 6 HR AND LEFT OVERNIGHT AT ROOM TEMP. TO GIVE 1.74 G 2, METHYL, 3, HYDROXY, 4, (ALPHA, HYDROXYETHYL), 5, HYDROXYMETHYLPYRIDINE, M. 172-3DEGREES (ETOH-ET SUB2 O).

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3/3 022

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC. ACCESSION NO--AP0103222

ABSTRACT/EXTRACT--A MOXT. OF 0.8 G CYCLOPENTEN, 3, ONE, 0.63 G II, AND 0.1 G PYROGALLOL WAS HEATED 2 HR AT 110DEGREES, COOLED, TREATED WITH 1 ML 25PERCENT DRY HCL IN ETOH, CAREFULLY SHAKEN WITH 70 ML ABS. ET SUB2 O, AND LEFT OVERNIGHT IN A REFRIGERATOR TO GIVE 0.22 G V, M. LARGER THAN 170DEGREES (ETOH-ET SUB2 O).

UNCLASSIFIED

USSR

ZAPEVALOV, P. P., MILASHCHENKO, N. Z., PADZINOVSKIY, I. P., GORTLEVSKIY, A. A.,
MARINCHENKO, M. Z., YAKOVLEVA, L. I., YEMEL'YANOV, I. M.

"Results of Field Testing of Various Emulsions and Forms of 2, 4-D Butylester"

Nauch. Tr. Omsk. S-Kh. In-t. [Scientific Works of Omsk Agricultural Institute],
No 84, 1971, pp 129-131. (Translated from Referativnyy Zhurnal Khimiya, No 4,
Moscow, 1972, Abstract No 4N693 by T. A. Belyayeva).

Translation: In 1969, experiments were performed to compare the technical effectiveness of various 2, 4-D emulsions under field conditions when sprayed from the air (dose 0.4 kg/ha). Products used were: 1. 2,4-D -- technical preparate +1% OP-10 emulsifier; preparation of the emulsion was by spraying the preparate into water; 2. 2,4-D -- technical preparate +3% OP-10, spraying method; 3. 2,4-D -- "A" form (60% 2,4-D butylester, 20% OP-7, 20% diesel fuel); 4. 2,4-D type "B" (60, 10 and 30 % respectively); 5. 2, 4-D -- "C" form (60, 5 and 35 % respectively); 6. 2,4-D -- technical preparate. The effects of the herbicide were evaluated on the basis of the quantity and weight of perennial weed shoots and the wheat harvest. Versions 1 and 2 give the best results.

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USSR

UDC 615.388.03:617-001.36-08

PAFOMOV, G. A., and ZHILIS, B. G.

"Blood of Suddenly Deceased Persons and Its Use in the Treatment of Patients Suffering From Traumatic Shock"

Moscow, Problemy Gematologii i Perelivaniya Krovi, No 11, 1971, pp 38-42

Abstract: An analysis is made of treatment of 448 patients suffering from traumatic shock who were given transfusions of cadaver blood. This treatment was no less effective than that with donor blood. Steady normalization of hemodynamics and progressive improvement in the rhythm and frequency of respiration were observed. Not a single patient exhibited signs of hemorrhagic diathesis of the tissues nor increased metabolic acidosis. Steady improvement was shown on EKG and EEG readings. The results confirm the value of cadaver blood for this type of treatment.

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1/2 020 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EVALUATION OF THE VIABILITY OF ERYTHROCYTES OF CADAVER BLOOD BY THE
ISOTOPE METHOD CHROMIUM 51 -U-
AUTHOR--(04)-SUVOVA, I.A., PAFOMOV, G.A., TALSKAYA, I.N., OLOUROVA, S.V.
COUNTRY OF INFO--USSR
SOURCE--PROBL GEMATOL PERELIV KROVI 15(4): 26-28. 1970.
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CADAVER BLOOD, ERYTHROCYTE, BLOOD PRESERVATION, CHROMIUM
ISOTOPE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/E08 STEP NO--UR/9080/70/015/004/0026/0028
CIRC ACCESSION NO--AP0140623

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140623

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ASSESSMENT OF VIABILITY OF ERYTHROCYTES OF CADAVER BLOOD WAS MADE BY LABELING WITH CR PRIME51. THE NEW METHOD OF PRESERVATION OF CADAVER BLOOD WITH THE SACCHAROSE SOLUTION PROVIDED (ACCORDING TO THE DATA INVIVO) GOOD PRESERVATION OF ITS FORMED ELEMENTS: 24 HR AFTER THE TRANSFUSION TO THE RECIPIENT SURVIVAL OF ERYTHROCYTES OF 10 DAY BLOOD AVERAGED 81PERCENT. FACILITY: LAB. BLOOD PRESERV., CENT. INST. HEMATOL., BLOOD TRANSFUS., MIN. HEALTH USSR, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 615.388

SUVOROVA, I. A., PAFOMOV, G. A., and OLDUROVA, S. V.

"Clinical Use of Cadaver Blood Preserved With Sucrose and Levomycetin"

Moscow, Voenno-Meditsinskiy Zhurnal, No 2, 1971, pp 73-75

Abstract: In the Central Order of Lenin Institute of Hematology and Blood Transfusion, the authors developed a preservative for cadaver blood consisting of 100 g of sucrose and 0.15 g of levomycetin (chloramphenicol) in double distilled water (20 ml of the solution is added to 80 ml of blood). In vitro experiments showed that such blood can be safely stored as long as 28 days. Only one of 74 patients who received transfusions of cadaver blood with the authors' preservative for anemia, shock, gastrointestinal, gynecological or other diseases had a mild reaction. Reports from three other Moscow hospitals (Sklifosovskiy First Aid Institute, Central Institute of Traumatology and Orthopedics, and City Hospital No 53) showed that only 1% of 2,991 transfusions of blood so preserved (250 to 1,500 ml, stored for 7 to 21 days) produced mild or moderate reactions. There were no severe reactions or complications. The effects of the transfusions were beneficial in all cases.

1/1

- 52 -

USSR

UDC 615.388.073:612.111.3

SUVOROVA, I. A., ~~PAFOMOV, G. A.~~, TAL'SKAYA, I. N., and OLDUROVA, S. V., Laboratory of Blood Preservation, Central Institute of Hematology and Blood Transfusion, Ministry of Health USSR, and Laboratory of Blood Transfusion, Institute of First Aid imeni Sklifosovskiy, Moscow

"Estimating the Viability of Erythrocytes of Cadaver Blood by an Isotope Method Involving the Use of Cr⁵¹"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 4, 1970, pp 26-28

Abstract: The viability of erythrocytes of cadaver blood preserved with a sucrose solution containing levomycetin (a method developed by Suvorova) was compared with that of erythrocytes preserved by the older sucrose-glucose-phosphate method. After labeling of erythrocytes with Cr⁵¹, the blood was used, to stimulate healing, in transfusions to recovering patients with fractures of the arm and leg bones. Blood samples were taken from the patients at various times up to 21 days after the transfusion, and on the basis of the radioactivity of the samples, the half-life of the erythrocytes was determined. The viability of erythrocytes preserved by the sucrose method was superior to that of those preserved by the sucrose-glucose-phosphate method. The survival of sucrose-treated erythrocytes 24 hr after transfusion of blood stored for 10 days averaged 81 percent. This

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USSR

SUVOROVA, I. A., et al, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 4, 1970, pp 26-28

met the requirement for transfusion blood which states that at least 70 percent of the erythrocytes must survive for 24 hr after transfusion.

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1/2 011 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ESR OF ENERGETICALLY NONEQUIVALENT TETRAGONAL CU PRIME2 POSITIVE
IONS IN HYDRATED CUNAA ZEOLITE -U-
AUTHOR--(04)--SILCHENKO, V.A., PAFOMOV, N.N., MATYASH, I.V., PIONTKOVSKAYA,
M.A.
COUNTRY OF INFO--USSR
SOURCE--DOPOV. AKAD. NAUK UKR. SSR, SER. A 1970, 32(3): 235-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ELECTRON SPIN RESONANCE, COPPER, ION, ZEOLITE, EPR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1298 STEP NO--UR/0641/70/032/003/0235/0237
CIRC ACCESSION NO--AT0126712
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0128712

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ANAL. OF THE MEASURED EPR SPECTRA OF CU PRIME2POSITIVE IONS IN A HYDRATED A TYPE ZEOLITE IN WHICH SIMILAR TO 20PERCENT OF NA PRIME POSITIVE IONS WAS REPLACED (BY USUAL ION EXCHANGE PROCEDURE) REVEALED THAT THE CU PRIME2POSITIVE IONS IN THE ZEOLITE ARE IN 2 ENERGETICALLY NONEQUIV. STATES MAGNITUDE OF X PRIME2-Y PRIME2 GREATER THAN AND MAGNITUDE OF 3Z PRIME2-R PRIME2 GREATER THAN. THE SPECTRUM OF THE HYDRATED ZEOLITE CONTG. SIMILAR TO 20PERCENT CU PRIME2POSITIVE IONS IS CONSIDERED AS A SUPERPOSITION OF 2 COMPONENTS: THAT OF LOW CU CONTENT ZEOLITE (UP TO SIMILAR TO 8PERCENT) AND OF A DEHYDRATE (AT 500DEGREES AND 10 PRIME NEGATIVE6 MM HG) ZEOLITE. THE EXPTL. EPR SPECTRUM SPECTRUM OF CU PRIME2POSITIVE IONS IN THE GROUND STATE MAGNITUDE OF 3Z PRIME2-R PRIME2 GREATER THAN IS DESCRIBED FOR THE 1ST TIME. FACILITY: DONETS. FIZ.-TEKH. INST., DONETSK, USSR.

UNCLASSIFIED

USSR

UDC: 681.3.06:51

PAGAVA, I. S., KHINTIBIDZE, M. G.

"On Using Computer Technology for Information Retrieval"

Tr. Vychisl. tsentra AN GruzSSR (Works of the Computer Center, Academy of Sciences of the Georgian SSR), 1970, 10, No 2, pp 35-42 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V721)

Translation: The authors consider a retrieval algorithm for chemical compounds in linear code, and implementation of this algorithm on the BESM-2 digital computer at the computer center of the Academy of Sciences of the Georgian SSR. The linear code is a set of digits, letters, symbols and elements in a periodic system. There are 146 symbols altogether in the linear code used to record chemical compounds. Each linear code for a chemical compound is recorded on a single card. The ordinal number for this compound is recorded on the same card. The aggregate of these cards represents the search pattern of the documents. The linear code of the document consists of a limit sign and a certain number of groups of symbols which are separated from each other by the

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PAGAVA, I. S., KHINTIBIDZE, M. G.

symbol ":". These groups are called fragments of the linear code. A linear code may contain a maximum of ten fragments. The fragment in turn is an aggregate of a maximum of 70 symbols. The number of fragments and the number of symbols in a fragment is unlimited [sic].

The documents are stored in a file which is supplemented in time. Another form of linear code for a chemical compound is a retrieval instruction or a so-called interrogation which by analogy with the document is recorded on a single card with its ordinal number.

USSR

UDC 669.245'26'295'71:620.186:669.018.2:621.785.78

PAISOV, A. I., DMITRIYEV, L. I., ANISIMOVA, G. V., and KORNEYEVA, N. N.

"Study of the Effect of Aging Temperature on the Structure and Properties of KhN77TYuR Alloy"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1970, No 5, pp 97-102 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 31751 by E. Volin)

Translation: The interrelationship is found between σ_{100} and $\sigma_{0.2}$ at 700 and 800° (from reference data), characterized by the correlation factor 0.9 and 0.86 respectively, as well as between σ_{1000} , $\sigma_{0.2}$ and testing temperature, correlation factor 0.71. KhN77TYuR alloy was tested after heating to 1080°, 8 hr, with subsequent aging at 700-850°, 16 hr. An aging temperature increase in the 700-800° range increases heat resistance and stability of structure. Aging at 850° sharply reduces rupture strength as a result of a decrease in the quantity of the strengthening phase. Air cooling from 1080° assures a higher rupture strength as a result of further aging in tests than with subsequent

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- 42 -

USSR

PAISOV, A. I., et al., Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa, 1970, No 5, pp 97-102

aging at 700 and 800° (₃₅⁷⁵⁰ 150 hr as against 95 and 120 hr respectively).

0.2 changes analogously. Four illustrations. Bibliography with seven titles.

2/2

USSR

UDC 612.741.074.45

ESYREV, O. V., and PAK, A. D., Laboratory of Biochemistry, Institute of Physiology, Academy of Sciences Kazakh SSR, Alma Ata

"The Effect of Toxins on Acetylcholine Contracture"

Leningrad, Tsitologiya, Vol 12, No 10, Oct 70, pp 1,343-1,345

Abstract: The effect of NaF, monoiodoacetic acid, 2,4-dinitrophenol, CdCl_2 , NiCl_2 , and $\text{Pb}(\text{NO}_3)_2$ on the course of acetylcholine contracture of the frog rectus abdominis was studied. It was found that NaF, the respiratory toxin NaN_3 , and dinitrophenol by themselves do not produce a contracture of the muscle. In combination with acetylcholine, however, they enhance contracture. The extent of muscular response to acetylcholine under the influence of these compounds depends on the acetylcholine concentration in the solution and the period of action of the toxic compound. Treatment of the muscles with d-tubocurarine reduces but does not prevent the contracture produced by acetylcholine in the presence of the above metabolic toxic compounds.

1/1

USSR

UDC: 621.315.592

ANDREYEV, V. M., BORODULIN, V. I., KONYAYEV, V. P., PAK, G. T., PETROV, A. I.,
PORTNOY, Ye. L., SHVEYKIN, V. I., Physicotechnical Institute imeni A. F.
Ioffe, Academy of Sciences of the USSR, Leningrad

"Spatial Distribution of Heterolaser Emission"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 9, Sep 72, pp 1739-
-1748

Abstract: The paper presents the results of experimental and theoretical studies of the luminous field of emission from a heterolaser in the short range and long range zones for various thicknesses of the active region and outside dimensions of the cavity. The distribution of the luminous field on the mirror face of the cavity crosswise of the active region which was observed in the experiments can be satisfactorily described within the framework of a flat triaxial waveguide model. The angular distribution of heterolaser emission in the plane perpendicular to the heterojunction plane can be treated with a fair degree of accuracy as diffraction of a waveguide wave on the open end of a flat metal waveguide filled with a dielectric. The pattern of the long-range field is symmetric relative to the normal to

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USSR

ANDREYEV, V. M., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 9, Sep 72, pp 1739-1748

the mirror. The directions to the principal maxima are determined by the angle of refraction of the partial waveguide plane waves. Modes of increasingly higher orders are stimulated in the active region as its width is increased. The pattern of the short-range field (order of the mode) does not depend on either the cavity length or the pumping. In heterolasers with wide active regions, three-dimensional modes of total internal reflection are stimulated which impair the quantum efficiency and increase the divergence of emission. These modes can be suppressed by increasing the ratio L/l , TM modes being suppressed faster.

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- 42 -

USSR

UDC 621.375.82

BORODULIN, V. I.; MALYAVKINA, G. M.; PAK, G. T.; PETROV, A. I.; CHERNOUSOV, N. P.; SHVEYKIN, V. I.; YASHUMOV, I. V.

"Some Properties of Degradation of Heterolasers"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 3, Moscow, Soviet Radio, 1972, pp 108-110 (from RZh-Fizika, No 12, Dec 72, Abstract No 12D977)

Translation: An experimental study was made of the catastrophic and slow degradation of heterolasers. It was demonstrated that catastrophic degradation occurs for average light energy flux densities $(2-4) \cdot 10^6$ watts/cm² and local densities of 10^7 watts/cm². Depending on the light energy flux density the service life of the heterolasers can vary from several minutes to 100 hours and more; catastrophic degradation in this case is the limiting case of slow degradation under the effect of radiation. Heterolasers with a radiation power in the pulse of ≥ 10 watts, a frequency of 6 kilohertz, and a pulse duration of 100 nanoseconds are capable of operating more than 100 hours without a significant reduction in power.

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UDC 621.315.592

USSR

ALFEROV, ZH. I., ANDREYEV, V. M., BELOUSOVA, T. YA., BORODULIN, V. I., GORBYLEV, V. A., PAK, G. T., PETROV, A. I., PORTNOY, YE. L., CHLENOSOV, N. P., SHVEYKIN, V. I., YASHCHUMOV, I. V.

"Effective Injection Heterolasers Operating in the Wavelength Band of 7,400-9,000 Å"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 568-569

Abstract: Results are presented from a study of the characteristics of effective heterolasers radiating in the wavelength band of 7,400-9,000 Å at room temperature. The $n\text{-Al}_x\text{Ga}_{1-x}\text{As-p-Al}_y\text{Ga}_{1-y}\text{As-p}^+\text{-Al}_x\text{Ga}_{1-x}\text{As}$ heterojunctions were obtained by epitaxial growth from GaAs-AlAs solutions. All the investigated diodes had a Fabry-Perot resonator. The threshold current density, the external differential quantum efficiency and the radiation power per pulse at 300°K are tabulated for various models of the lasers. Graphs are presented showing the mean values of the threshold current density and the external differential quantum efficiency as functions of the emission quantum energy and the temperature dependence of the external differential quantum efficiency. The threshold current density increases exponentially with an increase in temperature according to the known law [V. I. Leskovich, et al., FTP, No 1, 1440, 1967]. Up to 1/2

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ALPEROV, ZH. I., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 568-569

a temperature of 250° K, the external differential quantum efficiency does not vary, in practice, but then it decreases with temperature. The data demonstrate the possibility of obtaining generation in the continuous mode at 300°K up to 7,700 Å.

2/2

86

USSR

UDC 621.373.326

PAK, G. T., PETROV, A. I., FAYNBOYM, YE. G., CHERNOUSOV, N. P., SHVEYKIN, V. I.,
YASHUMOV, I. V.

"Internal Parameters of Injection Lasers at 300° K"

V sb. Kvant. elektronika (Quantum Electronics-- collection of works), Moscow,
No 5, 1971, pp 99-101 (from RZh-Radiotekhnika, No 1, 1972, Abstract No 1D350)

Translation: The results of experimental studies of the basic parameters of the active zone of injection lasers based on diffusion and epitaxial p-n-transitions and heterotransitions in the GaAs-AlAs system are described. It is demonstrated that heterolasers with two-sided limitation have better characteristics: the specific amplification coefficient is 10^{-2} cm/amp, the inversion current density is 2.1 kiloamps/cm², and the losses are 26 cm⁻¹. There is 1 illustration and a 6-entry bibliography.

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USSR

UDC 621.378.35

GORBYLEV, V.A., ~~PAK, G.T.~~, PETROV, A.I., CHERNOUSOV, N.P., SHVEYKIN, V.I.,
YASHUMOV, I.V.

"Dependence Of Threshold Of Generation Of Injection Lasers On The Duration Of
The Pulses Of The Pumping Current"

Kvantovaya elektronika, Moscow, No 5, May 71, pp 97-99

Abstract: The dependence is experimentally studied of the threshold of generation of injection lasers with diffused and heterogenous junctions in the system GaAs--AlAs on the duration of the pulses of the pumping current in the interval 2--100 nsec. The magnitudes are determined of the effective lifetime of the injected electrons for three types of laser diodes: with diffused p-n junction (~ 1 nsec), with one heterojunction (~ 2.5 nsec) and with two heterojunctions (3--6 nsec). The nanosecond pulses of the pumping current in the 2--100 nsec range with a building up front less than 1 nsec were shaped with the aid of a TG11-8/1 thyatron and dispersed delay lines. The pulse repetition frequency was regulated from 100 Hz to 10 kHz. Received by editors, 22 May 71; after revision, 6 May 71. 2 fig. 1 tab. 6 ref.

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AA0044744

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

y70

241734 LIQUID LEVEL RECORDER is mounted in a feeder tank which is separated by a partition in two parts. The upper part contains a chart feedmechanism and the lower part is filled with water and carries a float with an arm and pen. An air tube communicates from above the water level of the lower part to the water level of the main tank and water from the feed tank will be stopped from leaving the latter as soon as the main tank level has covered the lower opening of the air tube.

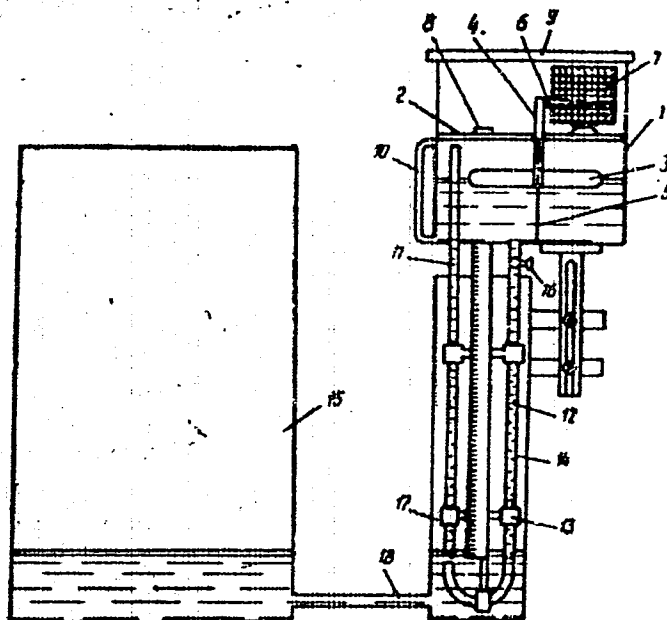
29.1.68 as 1213868/18-10. N.V. DANILCHENKO et alia.
KAZAKH WATER SUPPLY RES.INST. (2.9.69) Bul 14/
18.4.69. Class 42e. Int.Cl.C 01 f.

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AUTHORS: Danil'chenko, N. V.; Pak, I. V.; Kandrachuk, V. F.

Kazakhskiy Nauchno - Issledovatel'skiy Institut Vodnogo Khozyaystva

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19771502

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MECHANISM OF THE SMILES REARRANGEMENT OF O,METHYLDIARYL SULFONES;
EFFECT OF STRUCTURAL FACTORS AND REACTION CONDITIONS ON THE MECHANISM OF
AUTHOR--(02)-DROZD, V.N., PAK, KH.A.
COUNTRY OF INFO--USSR
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REACTION MECHANISM, METHYLENE, NAPHTHALENE
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PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125539

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF BULI TO A SOLN. OF 2,ETC SUB6 H SUB4 SO SUB2 C SUB6 H SUB2 ME SUB3 2,4,6, IN ET SUB2 O GAVE 4A,9A,DIHYDRO,5,7,DIMETHYL,4,ETHYLTHIOXANTHENE 10,10,DIOXIDE CARBANION (1) WHICH WAS CONVERTED BY STORAGE AT ROOM TEMP. TO 2,ETC SUB6 H SUB4 CH SUB2 C SUB6 H SUB2 ME SUB2 (SO SUB2 H),3,5,2. THE ADDN. OF WATER TO 1 GAVE CIS,4A,9A,DIHYDRO,5,7,DIMETHYL,4,ETHYLTHIOXANTHENE 10,10,DIOXIDE WHICH WAS CONVERTED BY BROMINATION DEHYDROBROMINATION TO 2,4,DIMETHYL,5,ETHYLTHIOXANTHENE 10,10,DIOXIDE. THE MECHANISM OF THE ABOVE REACTIONS IS THE SAME AS THAT FOR OTHER LESS SUBSTITUTED DIARYL SULFONES. THE SMILES REARRANGEMENT OF ALPHA OR BETA NAPHTHYL MESITYL SULFONE PROCEEDS BY THE DIRECT REPLACEMENT OF THE SO SUB2 GROUP WITH A CH SUB2 GROUP CONTRARY TO THE OPINION OF OTHER AUTHORS (W. E. TRUCE, ET AL., 1966). FACILITY: MOSK. SEL'SKOKHOZ. AKAD. IM. TIMIRYAZEVA, MOSCOW, USSR.

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Acc. Nr:

AP0042048

Abstracting Service:

CHEMICAL ABST

Ref. Code:

UR 0366

89559w Mechanism of Smiles rearrangement of o-methyl-diaryl sulfones; rearrangement of diphenyl mesityl sulfones. Drozd, V. N.; ~~Pak, Kh. A.~~; Gumenyuk, B. B. (Mosk. Sel'skokhoz. Akad. im. Timiryazeva, Moscow, USSR). Zh. Org. Khim. 1970, 6(1), 137-44 (Russ). The treatment of 2,4,6-Me₃C₆H₃X (I) (X is o-, m-, or p-PhC₆H₄SO₂) with BuLi or *tert*-BuLi in anhyd. org. solvents under N gave 2,4,6-Me₃C₆H₃SO₂H (II). When the reaction was arrested ~5 min after the start *cis*-4a,9a-dihydro-5,7-dimethyl-4-phenylthioxanthene 10,10-dioxide (Ia) or *trans*-4a,9a-dihydro-5,7-dimethyl-2-phenylthioxanthene 10,10-dioxide (Ib) were isolated. The stereochem. of Ia and Ib was detd. by NMR spectroscopy and their structures were detd. by synthesis. The mechanism of II formation involves the formation of Ia or Ib cations followed by the intramol. β -elimination of proton, aromatization of A rings, and breaking of 4a-10 bonds.

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UDC 632.954:633.11

PAK, K. I., OGURTSOVA, N. I., Chinkent Experimental Station

"Effectiveness of Applying Herbicides to Cotton"

Moscow, Khimiya v Sel'skom Khozyaystve, No 9, 1971, pp 50-51

Abstract: In 1966-1969, at the Chinkent Experimental Station the following herbicides were tested in the weed control program for cotton fields: isopropyl N-(3-chlorophenyl)carbamate, kitoran, diurone, dactal, herbane and gesagard. Data are presented on the effectiveness of these herbicides. Application of the first three herbicides mentioned resulted in killing 72.7-77.4 percent of the weeds on the average. Out of the last three mentioned, herbane killed the largest number of weeds (75-78 percent). The effectiveness of gesagard depended on the weather after injection. On the average higher cotton yields resulted from injection of gesagard in doses of 3 and 4 kg/hectare simultaneously with planting the cotton. All the insecticides with the exception of diurone were considered effective in the cotton fields of Chinkent Oblast. The herbicides were most dangerous to the cotton in the case of presprout application.

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- 66 -

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UDC: 621.681.4

KONDRASHEV, V. S., PAK, K. S.

"A Vacuum Pump"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrabotsy, Tovarnyye Znaki,
No 12, Apr 72, Author's Certificate No 334403, Division F, filed 30 Apr 70,
published 30 Mar 72, p 137

Translation: This Author's Certificate introduces: 1. A vacuum pump which contains an exhaustible housing with elastic shell forming the working chamber, and a rotor with rollers for transferring gas as the rotor traverses the shell from a suction pipe to a delivery pipe which is equipped with an exhaust valve. As a distinguishing feature of the patent, the dead space is eliminated and efficiency is improved by making the exhaust valve in the form of an elastic plate fastened at a right angle to the inside wall of the shell (for instance by making it in one piece with the shell) and passing through an opening in the outer wall of the shell into the delivery pipe. 2. A modification of this pump distinguished by the fact that a box is mounted on the housing with an elastic element such as a diaphragm, and with a bellows connected on the inside to the elastic

1/2